

REMARKS/ARGUMENTS

This is in response to the Office Action dated March 17th, 2006.

Claims 29, 34-40, and 50 are amended. Claim 51 is new. The amendments to the claims are directed to corrections of the errors and objections noted in the office action. It is believed that no new matter is introduced by the amendments.

Applicant respectfully requests entry of the amendments and withdrawal of the claim rejections.

The 35 U.S.C. §112, First Paragraph (Written Description)

Claims 34, 36, and 50 are amended according to the suggestions of the Office Action on pages 3-4. Particularly, Claims 34 and 36 have been amended to change “nanostructure engineered carbon” to “nanostructure engineered pyrolytic carbon”; and Claim 50 has been amended to change “organic binders” to “organic thermosetting binders” per the suggestion of the Examiner. The amendments are supported by the originally disclosed specification and render the §112 (1) rejection moot. Withdrawal of the rejection of Claims 34, 36 and 50 under 35 U.S.C. §112 (1) is respectfully requested.

The 35 U.S.C. §112, Second Paragraph (Indefiniteness)

Claims 39 has been amended with punctuation to better clarify the technical features and to place the claims in better condition for allowance.

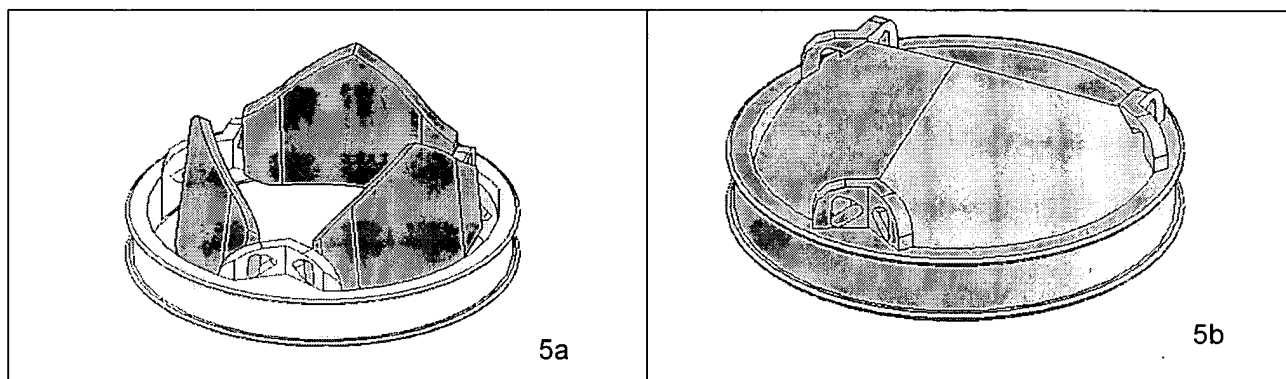
The 35 U.S.C. §102 Rejection

Claims 29-34 and 36-40 and 50 are rejected under 35 USC 102(b) as being anticipated by Carpentier et al. (USPN 6,039,759).

Applicant respectfully disagrees that Carpentier et al. discloses a trileaflet valve with all the elements of Claim 29. In particular, the Examiner has pointed out that the hinges disclosed in Carpentier’s patent are disposed on the inner surface of the annular valve body. The hinges of

the instant application, to the contrary, are extended from the rim of the annular body as shown in FIG 5. Claim 29 has now been amended to clarify the distinctions of the instant application.

The hinge design of the trileaflet valve in the instant application is critical; as it provides an improved blood flow once blood passes through the annular valve body and thus renders a more complete wash of the hinges. Provided herein are the replications of FIG 5a and FIG. 5b in the instant application (with a hinge structure shown in FIG 4p) providing a clear illustration of the unique trileaflet vale design.



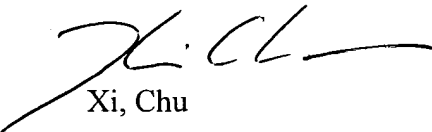
The design of Carpentier's trileaflet valves, however, reduces the open area of the housing and results in a restricted hinge area and a reduced blood flow velocity at the hinge area. The amended Claim 29 has reflected such a fundamentally different technical feature on the trileaflet design in the instant application.

Accordingly, Applicant submits that amended Claim 29 and dependent claims 30-34, 36-40 and 50 are allowable over the reference of Carpentier.

CONCLUSION

Applicant respectfully submits that the pending claims are in condition for allowance.
The issuance of a formal Notice of Allowance at an early date is respectfully requested.

Respectfully submitted,



Xi, Chu